

SETKINA, V. N.

USSR/Chemistry - Isotope Exchange,  
Deuterium

11 Sep 53

"Hydrogen Exchange of Saturated Carboxylic Acids,"  
V. N. Setkina, Ye. V. Bykova, Inst Org Chem, Acad  
Sci USSR

DAN SSSR, Vol 92, No 2, pp 341-343

Found that only the hydrogen atoms at the alpha-carbon of carboxylic are exchanged for deuterium of deuteriosulfuric acid. This exchange also takes place with deuterophosphoric acid, although at a much slower rate. The results confirm assumption made in connection with work on hydrocarbons

269T18

---

that oxidation of methine group (by sulfuric acid in this case) to radical or carbonium ion precede exchange. Presented by Acad B. A. Kazanskiy  
13 Jul 53.

SETKINA, V.N.

U S S R .

[Hydrogen exchange of cyclic saturated hydrocarbons in reaction with sulfuric acid. V. N. Setkina, D. N. Kurasov, and A. L. Liberman. *Dokl. Akad. Sci. U.S.S.R.*, Div. Chem. Sci. 1954, 89-91 (Engl. translation).—See C.A. 49, 61417.

H. L. H.]

SETKINA, V. N.

# U S S R .

1-Hydrogen exchange of cyclic saturated hydrocarbons in reaction with sulfuric acid. V. N. Setkina, D. N. Kurzanov, and A. L. Liberman (*Dokl. Akad. Nauk S.S.S.R.*, Moscow). *Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk* 1954, 100-10; cf. *C.A.* 49, 2200k. --D-H exchange of cyclic hydrocarbons in the presence of D-enriched  $H_2SO_4$  was examd. The D-H exchange is entered into by monocyclic hydrocarbons which contain tertiary C atoms (methyl-, 1,4-dimethyl-, and 1-methyl-4-ethylcyclohexane, methylcyclopentane), and the equil. is established at room temp. in a few hrs. No exchange takes place with cis and trans forms of decahydronaphthalene. In mixts. of hydrocarbons which contain secondary and tertiary C atoms, only the latter react. Substantially no exchange occurs with cyclohexane. 1,1-Dimethylcyclohexane also does not react, neither does cyclopentane. When the exchange takes place, all H atoms are capable of exchange. Isomerization of substituted cyclohexanes is taken into account. G. M. Kuznetsov

Reactions of hydrogen exchange of saturated ketones with acids. D. N. Kursanov and V. N. Setkina (I. D. Zelinskii Inst. Org. Chem., Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* 94, 69-72 (1954).—D-H exchange was studied in the series of satd. aliphatic ketones in media containing  $H_2SO_4$  and  $H_3PO_4$  enriched with D. The following extents of exchange, reported as percentages of exchange of all  $\alpha$ -H atoms in the ketones, were found: in  $D_2SO_4$ , MeCOBu 99.5, cyclopentanone 102.9, cyclohexanone 82.6; in  $D_2PO_4$ , MeCOBu 100.3, cyclopentanone 104.9, cyclohexanone 100.0. The proof that the exchanged D atoms were located in  $\alpha$ -positions was had by treatment of the D-exchanged ketones with  $BzH$  yielding the dibenzal deriva. which were devoid of D content. The reactions in  $D_2SO_4$  were run 1 hr. at room temp., those in  $D_2PO_4$  for 48 hrs. at room temp. Cf. *C.A.* 47, 851f. G. M. Kosolapoff

SETKINA, V. N.

USSR/Chemistry

Card : 1/1

Authors : Lavrushin, V. F., Kursanov, D. N., Memb. Corres. of Acad. of Sc. USSR.;  
and Setkina, V. N.

Title : Reaction of saturated hydrocarbons with sulfuric acid

Periodical : Dokl. AN SSSR, 97, Ed. 2, 265 - 266, July 1954

Abstract : Experiments showed that saturated hydrocarbons absorb light in the range of very short waves thus indicating that the curves of their sulfuric acid solutions owe their origin to hydrocarbon-sulfuric acid reaction products. Since the absorption curves of hydrocarbons are analogous to each other and with the absorption curves of trimethylcarbinol it becomes evident that the nature of their reaction with sulfuric is also identical. It was also proven that the particles, forming during the reaction of hydrocarbons with sulfuric acid, are identical. Six references. Graph

Institution : Acad. of Sc. USSR, Inst. of Element. - Organic Compounds and the A. M. Gorkiy State University, Kharkov

Submitted : March 24, 1954

SETKINA, V. N.

USSR/Chemistry - Physical chemistry

Card 1/1 : Pub. 22 - 21/48

Authors : Kurasnov, D. N., Memb. Corresp. of Acad. of Sc. USSR.; Setkina, V. N.;  
and Bykova, E. V.

Title : About the intra-molecular effect of positive-charged centers on the  
proton mobility of H-atoms

Periodical : Dok. AN SSSR 97/5, 835-838, August 11, 1954

Abstract : The effect of positive-charged centers on the proton mobility of hydro-  
gen atoms, is explained. The difficulties involved in studying the  
effect of a tri-covalent positive charged (oxonium) O-atom on the pro-  
ton activity of H-atoms, are discussed. The results of the hydrogen  
interchange reactions are shown in tables. Four references: 3-USSR  
and 1-German (1933-1954).

Institution : ...

Submitted : April 8, 1954

*Setkina, V.N.*

USSR/ Chemistry - Analytical chemistry

Card 1/1 Pub. 22 - 32/63

Authors : Setkina, V. N.; Plate, A. F.; Sterligov, O. D.; and Kursanov, D. N., Memb. Corres. of Acad. of Sc. USSR

Title : Possibility of adapting the hydrogen exchange reaction for the analysis of saturated hydrocarbon mixtures

Periodical : Dok. AN SSSR 99/6, 1007-1010, Dec 21, 1954

Abstract : The characteristics of hydrogen exchange reaction and the possibility of applying this reaction for analytical purposes were investigated. A compulsory condition for the adaption of the hydrogen exchange reaction for the analysis of saturated hydrocarbon mixtures was found to be the attainment of reaction equilibrium. It was established that the hydrogen exchange reaction of aliphatic and alicyclic hydrocarbon mixtures containing from 5 to 7 carbon atoms in the molecule begins within a period of 10 - 20 hrs. The results, obtained during the reaction of two-component saturated hydrocarbon mixtures, are tabulated. Nine USSR references (1935-1954). Tables.

Institution: .....

Submitted: June 18, 1954

Setkina, V. N.

(Exchange reactions and cleavage in the group of quaternary ammonium salts. IX. Reaction of quaternary ammonium salts with secondary and tertiary alcohols. V. N. Setkina, N. K. Baranetskaya, and D. N. Kursanov (Inst. Hetero-org. Compounds, Acad. Sci. U.S.S.R., Moscow). *Izv. Akad. Nauk S.S.S.R., Otd. Khim. Nauk* 1955, 750-5; *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1955, 687-72 (Engl. translation); cf. *C.A.* 46, 4584. — Quaternary ammonium salts contg. the  $\text{ROCH}_2$  group react with secondary and tertiary alcs. with formation of formals. Thus, cyclohexyloxymethylpyridinium chloride (I) (30.64 g.) and 13.47 g. cyclohexanol after 6 hrs. at  $100^\circ$  gave 18 g.  $(\text{C}_6\text{H}_{11}\text{O})_2\text{CH}_2$  (II),  $b_p$  279-80°,  $d_4^{20}$  0.9716,  $n_D^{20}$  1.470. *sec*-Octyloxymethylpyridinium chloride (IIa) and *sec*-octyl alc. gave 48%  $(\text{C}_8\text{H}_{17}\text{CHMeO})_2\text{CH}_2$  (III),  $b_p$  162.5-3°,  $d_4^{20}$  0.8419,  $n_D^{20}$  1.4322. I and  $\text{MeEtCHOH}$  gave 24.9%  $(\text{MeEtCHO})_2\text{CH}_2$ ,  $b_p$  60.5-60.8°,  $d_4^{20}$  0.8472,  $n_D^{20}$  1.4124, 52.9%  $\text{MeEtCHOCH}_2\text{OC}_6\text{H}_{11}$ ,  $b_p$  99.5-101°,  $d_4^{20}$  0.9076,  $n_D^{20}$  1.4402, and 22.2% II. I and *iso*-PrOH gave 18.4%  $(\text{iso-PrO})_2\text{CH}_2$ , 52.2% *iso*-

$\text{PrOCH}_2\text{OC}_6\text{H}_{11}$ ,  $b_p$  70-70.5°,  $d_4^{20}$  0.9089,  $n_D^{20}$  1.4370, and 20.4% II. Isopropoxymethylpyridinium chloride and  $\text{MeEtCOH}$  gave 38.4% *iso*- $\text{PrOCH}_2\text{OCMe}_2$ ,  $b_p$  71.1-1.5°,  $d_4^{20}$  0.8223,  $n_D^{20}$  1.3930, 40.6%  $(\text{iso-PrO})_2\text{CH}_2$ , and 21%  $(\text{MeCO})_2\text{CH}_2$ ,  $b_p$  77-9.5°,  $d_4^{20}$  0.8306,  $n_D^{20}$  1.3982. IIa and  $\text{MeEtCOH}$  in 17 hrs. at  $120^\circ$  gave 8.9%  $(\text{MeCO})_2\text{CH}_2$ , 48%  $\text{MeCOCH}_2\text{OCHMeC}_6\text{H}_{11}$ ,  $b_p$  128-9°,  $d_4^{20}$  0.8351,  $n_D^{20}$  1.4204, and 43.1% III. I and *tert*-AmOH in 16 hrs. at  $110-15^\circ$  gave II and  $\text{C}_6\text{H}_{11}\text{OCH}_2\text{OCMe}_2\text{Et}$ ,  $b_p$  119.5-20.5°,  $d_4^{20}$  0.9103,  $n_D^{20}$  1.4453, in combined yield of 26%.  $\text{C}_6\text{H}_{11}\text{CHMeOCH}_2\text{Cl}$   $b_p$  98-9°,  $d_4^{20}$  0.9246,  $n_D^{20}$  1.4357.

G. M. Kosolapoff

Application of the Ball reaction on aromatic alcohols. I. Shirochiko Sugawara and Kitano Mizukami (Univ. Tokyo). *Pharm. Bull. (Japan)* 2, 341-2 (1954). — Ball's method (B., *et al.*, *C.A.* 42, 8911f) for oxidizing polyene alcs. in  $\text{Et}_2\text{O}$  with activated  $\text{MnO}_2$  to unsatd. aldehydes was applied to aromatic alcs. with the following results (alc., reaction, temp., reaction time in hrs., and % yield and m.p. of the semicarbazone of the corresponding aldehyde given):  $\text{Ph-CH}_2\text{OH}$ , 22-35°, 2, 70, 215-16°, 3,4- $\text{CH}_2\text{O-C}_6\text{H}_4\text{CH}_2\text{OH}$ , 35°, 1, 65, 177°, 2- $\text{HO-C}_6\text{H}_4\text{CH}_2\text{OH}$ , 20°, 3, 60, 224°, furfuryl, 19-20°, 3.5, 40, 190-2°, 3-pyridyl, 21°, 1.5, 50, 213-14° and 4-pyridyl, 35°, 3, 60, 213-15°. W. T. S.



SETKINA, V.N.; KURSANOV, D.N.

Hydrogen exchange reactions of saturated aldehydes and deuterio-phosphoric acids. Dokl. AN SSSR 103 no.4:631-634 Ag'55.  
(MIRA 8:11)

1. Chlen-korrespondent Akademii nauk SSSR. (for Kursanov)  
(Aldehydes) (Phosphoric acid) (Deuterium compounds)

Setkina, V. N.

4

Reaction of hydrogen exchange of dibasic saturated carboxylic acids. E. V. Bykova and V. N. Setkina. *Doklady Akad. Nauk S.S.S.R.* 103, 835-7(1955); *Ch. C.A.* 49, 184c.  
—Specimens of dicarboxylic acids in  $H_2SO_4$ , enriched with  $D_2SO_4$ , and contg. 7%  $SO_3$ , treated with ice-cold  $Et_2O$ , the acids recrystd., and D detd. by combustion of the Na salts showed the following extents (%) of D-H exchange in the acids after 100-300, 650, and 1560 hrs., resp., of interaction:  $(CH_2CH_2CO_2H)_2$ , 85, 100, 103;  $HO_2C(CH_2)_2CO_2H$ , 77, 83, 91;  $HO_2C(CH_2)_3CO_2H$ , 54, 104, 106;  $(CH_2CO_2H)_4$ , 1, 2, 3. In the higher acids the exchange involves the H atoms adjacent to the  $CO_2H$  group and does not attack the more remote  $CH_2$  links. Even after 2540 hrs.  $(CH_2CO_2H)_4$  gave but 4% exchange. G. M. Kosolapoff.

PM

Setkina, V. N.

7

Reaction of hydrogen exchange in saturated carboxylic acids with sulfuric acid-d<sub>2</sub>

V. N. Setkina, V. A. Arkova

Acad. Sci. USSR Div. Chem. Sci. Ser. B

The following percentages of H-D exchange took place between carboxylic acids and D<sub>2</sub>SO<sub>4</sub> in the indicated number of hrs. (in parentheses): iso-PrCO<sub>2</sub>H (110) 83%, (185) 98%, (200) 91%; Et<sub>3</sub>C<sup>+</sup>CO<sub>2</sub>H (130) 102%, (310) 80%; iso-PrCH<sub>2</sub>CO<sub>2</sub>H (120) 100%; iso-AmCO<sub>2</sub>H (189) 94%, (214) 87%; iso-AmCH<sub>2</sub>CO<sub>2</sub>H (240) 42%, (2520) 86%; Me<sub>3</sub>CCO<sub>2</sub>H 0%. The exchange takes place only with H atoms on the α-C atom and the extent of exchange is equal to the total no. of α-H atoms available. No exchange took place with acids contg. Br atoms in the α-position. The mechanism of exchange is discussed briefly.

G. M. Kosolapoff

DM

SETKINA, V.N.

8

✓ Reaction of hydrogen exchange of saturated hydrocarbons with one and several tertiary carbon atoms and sulfuric acid: D. N. Kursanov, V. N. Setkina, and A. P. Meshcheryakov (Inst. Heteroorg. Compds., Acad. Sci. U.S.S.R., Moscow). Doklady Akad. Nauk S.S.S.R. 105, 279-81 (1956); cf. C.A. 47, 851f. — H-D exchange of several branched hydrocarbons with  $D_2SO_4$  was studied in exposures up to 10.5 hrs. *n*-Octane gave 1.8-2% exchange; 3-methylheptane 100.1%; 2,3,4-trimethylpentane 98-99% exchange. Exchange of 3-methyl-3-D-heptane with  $H_2SO_4$  resulted in considerable enrichment of the acid with D and a corresponding loss of D by the hydrocarbon. The labeled hydrocarbon was prepd. by dehydration of 3-hydroxymethylheptane over  $Al_2O_3$  at 400°, yielding mixed octenes which with HCl gave 3-chloro-3-methylheptane,  $b_p$  46.5-6.8°,  $d_4^{20}$  0.8773,  $n_D^{20}$  1.4322, which was converted to  $RMgCl$  and this decompd. with  $D_2O$ ; 3-methyl-3-D-heptane was distd. and purified by chromatography on  $SiO_2$ ; the product used had  $n_D^{20}$  1.3982. The exchange reactions were run in a shaker at room temp. G. M. Kosolapoff

Chem

DM

SETKINA, V.N.

Hydrogen exchange of aldehydes, ketones, and acids with mineral  
acids. Ukr. khim. zhur. 22 no.1:38-39 '56. (MIRA 9:6)  
(Hydrogen) (Acids)

Setkina, V. N.

Reactions of hydrogen exchange of 1-methylcyclohexanol with phosphoric acid. V. N. Setkina and D. S. Krasnaya (Inst. Heteroorg. Compounds, Moscow). Dokl. Akad. Nauk S.S.S.R. 109, 562-4 (1956).—H-D exchange in the system of 1-methylcyclohexanol and D-enriched  $H_3PO_4$  at  $-5^\circ$  to  $0^\circ$  was studied by detn. of D in the alc. isolated after quenching the mixt. in aq.  $K_2CO_3$ . It was shown that D-H exchange does take place but the mechanism of exchange is not clear. 1-Methylcyclohexene under the same conditions fails to hydrate and shows weak D-H exchange. This excludes the olefin as a possible intermediate in the reaction of ROH. The latter probably undergoes D-H exchange through a carbonium ion. The extent of D-H exchange for ROH attains as much as 88% of total H content of the ROH. G. M. Kosolapoff

Chem

mp

KURSANOV, D. N., SETKINA, V. N., VITT, S. V., PARNES, Z. N.

"Study of the Mechanism of Certain Reactions by the Method of Hydrogen Exchange."

Problemy Khimii i Katalyza. S. G. Koshovskiy in Katalyza, Moscow, IIL-ro  
AN SSSR, 1956, 1957.

Most of the papers in this collection were presented at the Conf. on  
Katalyza, AN SSSR, 1956, 1957, 1958, 1959, 1960, 1961, 1962, 1963, 1964, 1965, 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1980, 1981, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025.

SETKINA, V. N., KURSANCV, D. N., BYKOVA, Ye. V.

"Carbonyl Ions in the Hydrogen Exchange Reactions."

Problems Kinetics and Catalysis. v. 9. Isotopes in Catalysis. Moscow, Izd-vo  
AN SSSR. 1957. 44pp.

Some of the papers in this collection were presented at the Conf. on  
Kinetics and Catalysis held in Moscow, U.S.S.R. Apr 5, 1956



SETKINA, V.N.; KURSANOV, D.N.; BYKOVA, Ye.V.

Carbonium ions in the hydrogen exchange reaction. Probl. kin. i  
knt. 9:234-241 '57. (MIRA 1T:3)  
(Carbonium compounds) (Hydrogen--Isotopes)

*SETRINA, V.N.*

KURSA NOV, D.N.; SETKINA, V.N.; VITT, S.V.; PARNES, Z.N.

Study of reaction mechanism by the hydrogen exchange method. Probl.  
kin. 1 kat. 9:242-244 '57. (MIRA 11:3)

(Chemical reaction--Conditions and laws)  
(Hydrogen--Isotopes)

SETKINA, V. N.

7 6  
448  
Reaction of benzopyridinium chloride with cyclopentadienylthione D. N. Karsanov, M. K. Baranetsky, and V. N. Setkina (Inst. Hetero-Org. Compounds, Acad. Sci. Moscow). *Doklady Akad. Nauk S.S.S.R.* 113, 116-19 (1957).—Treatment of 29.18 g. BiLi with 33.1 g. cyclopentadiene with cooling gave after standing 2 hrs. 71.9%  $C_5H_4Li$ , as detd. by carbonylation. This, suspended in  $Et_2O$  was added to a similar suspension of 102.9 g.  $C_5H_4N-CH_2PhCl$  and stirred 20 hrs., after which the mixt. was treated with  $H_2O$  yielding a ppt. of 6.55 g. compd. (I),  $C_{11}H_{11}N$ , augmented by 12.14 g. from the  $Et_2O$  soln.; the product is golden yellow, stable in air, sol. in  $Me_2CO$ ,  $PhNO_2$ ,  $CHCl_3$ , and pyridine; it decomps. above  $180^\circ$ . It dissolves in acid and is pptd. by bases. I. takes up 5 moles  $H$  over Pt, indicating 5 double bonds, confirmed by iodine no. The hydrogenated product,  $C_{11}H_{16}N$ , forms a methiodide, decomp.  $160-70^\circ$ , and chlorophosphate,  $C_{11}H_{16}N.O.5H.PtCl_4$ , decomp.  $140^\circ$ . The amine cannot be acetylated. I has a dipole moment of 9.7 D. The structure of I appears to be a bipolar ionic structure with a cyclopentadienyl ring on the 2-atom of pyridine, the latter having a pos. charge and the dienylium a neg. charge. C. M. Kosolapoff. Some peculiarities of 2,6-dichloro derivatives of pyridine. E. N. Yakhotov (S. Ordzhonikidze All-Union Chem. Pharm. Research Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* 113, 1088-9 (1957).—2,6-Dichloropyridines do not form vicrates or salts with mineral acids. 2-Chloro-4-

KIRSANOV, D. N., SUTKINA, V. N., PARNES, Z. N. and BYKOVA, Ye. V., (Inst. of Element-  
Organic Compounds AS USSR)

"Study of Several Heterolytic Reactions by the Hydrogen-Exchange Methods." p. 13.

Isotopes and Radiation in Chemistry, Collection of papers of  
2nd All-Union Sci. Tech. Conf. on Use of Radioactive and Stable Isotopes and  
Radiation in National Economy and Science, Moscow, Izd-vo AN SSSR, 1958, 380pp.

This volume published the reports of the Chemistry Section of the  
2nd AU Sci Tech Conf on Use of Radioactive and Stable Isotopes and Radiation  
in Science and the National Economy, sponsored by Acad Sci USSR and Main  
Admin for Utilization of Atomic Energy under Council of Ministers USSR  
Moscow 4-12 Apr 1957.

AUTHORS: Kursanov, D. N., Bykova, Ye. V.,  
Setkina, V. N. SOV/62-58-7-2/26

TITLE: Hydrogen Exchange in the Process of Heterolytic Reactions. Exchange of Hydrogen Atoms by the Substitution of Iodine in Alkyl Iodide (Vodorodnyy obmen v protsesse geteroliticheskikh reaktsiy. Obmen atomov vodoroda pri zameshchenii yoda v yodistykh alkilakh)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1958, Nr 7, pp 809 - 813 (USSR)

ABSTRACT: In the present paper the results obtained in the investigations of some reactions of the nucleophilic iodine substitution in alkyl iodide are described. The possibility of using the reaction of hydrogen exchange in the study of the mechanism of heterolytic reactions was investigated. Furthermore the hydrogen exchange was investigated in the following cases; a) In the hydrolysis of tertiary alkyl iodide by water enriched with heavy hydrogen (deuterium). b) In the exchange of iodine atoms in alkyl iodide with a 56% H J enriched with deuterium. It was found that the hydrogen exchange in C-H bonds occurs in such reactions where according to the data supplied by kinetic inves-

Card 1/2

Hydrogen Exchange in the Process of Heterolytic Reactions. Exchange of Hydrogen Atoms by the Substitution of Iodine in Alkyl Iodide SOV/62-58-7-2/26

tigations they take place according to the monomolecular mechanism. It was shown in detail that the hydrolysis of tertiary iodides ( $C_4H_9J$  and  $C_5H_{11}J$ ) and the iodide exchange in tertiary iodides are accompanied by hydrogen exchange reactions, if the hydrogen exchange does not take place in the reaction of the iodine exchange in secondary and primary iodides. This tends to show the bimolecular mechanism of these reactions. There are 2 tables and 30 references, 15 of which are Soviet.

ASSOCIATION: Institut elementoorganicheskikh soedineniy Akademii nauk SSSR  
(Institute of Elemental-organic Compounds, AS USSR)

SUBMITTED: February 5, 1957

Card 2/2

SOV/20-120-4-31/67

AUTHORS: Setkina, V. N., Kursanov, D. N., Corresponding Member,  
Academy of Sciences, USSR

TITLE: Hydrogen Exchange Reactions of Alkyl Chlorides With Hydrochloric Acid and of Tertiary Butyl Alcohol When the Hydroxyl is Substituted by Chlorine (O reaktsiyakh vodorodnogo obmena alkilkhloridov s solyanoy kislotoy i tretichnogo butilovogo spirta pri zamene gidroksila na khlor)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 120, Nr 4, pp. 801-804 (USSR)

ABSTRACT: The reactions of tertiary aliphatic alcohols with a saturated HCl solution proceed very rapidly and practically irreversibly under the formation of alkyl chlorides. Reliable data on the mechanism of this reaction are lacking in publications. It might be assumed that the mentioned reaction proceeds according to the carbonium-ion-mechanism. The authors attempted to decide whether in connection with it an exchange of hydrogen takes place. They have found that the number of hydrogen atoms exchanged for deuterium corresponds only to the number of  $\alpha$ -hydrogen atoms. For this purpose the reaction of tertiary

Card 1/3

SOV/20-120-4-31/67

## Hydrogen Exchange Reactions of Alkyl Chlorides With Hydrochloric Acid and of Tertiary Butyl Alcohol When the Hydroxyl is Substituted by Chlorine

butyl alcohol with a saturated HCl solution was investigated. The solution was enriched by deuterium. The rapidly formed tertiary butyl chloride contained only a small amount of deuterium. During a further contact between chloride and deuterio-chloric acid this amount increased (Table 1). Other tertiary chlorides behaved in the same way. A primary alkyl chloride, that is to say, butyl chloride did not enter the reaction under the same conditions (Table 2). Numerous investigations (Ref 4) of the mechanism of various solvolytic reactions of tertiary halide alkyls showed that all these reactions proceed according to the  $S_N$ -mechanism. Their velocity is determined by the ionisation velocity of tertiary halogenides. Obviously the mentioned reaction with deuterio-chloric acid is a special case of solvolytic monomolecular reactions. Thus it may be concluded that the initially mentioned hydrogen exchange reaction of tertiary alkyl chlorides is connected with their capability of being ionizable in a HCl solution which as is known has a high dielectric constant. The result of the ionisation of chlorides is their hydrogen exchange. The phenomenon that only  $\alpha$ -hydrogen atoms of the

Card 2/3



SOV/20-120-4-31/67

Hydrogen Exchange Reactions of Alkyl Chlorides With Hydrochloric Acid and  
of Tertiary Butyl Alcohol When the Hydroxyl is Substituted by Chlorine

chlorides take part in this process can be explained by the impossibility of migration of the carbonium center along the hydrocarbon atom chain. This is impossible because of an electrostatic attraction of this center by anions or as a result of the influence exerted on the carbonium carbon by the solvate shell. In this reaction the carbonium ions are either not formed at all or they are so short-lived that they have not enough time to be exchanged for the acidous deuterium donors. The first assumption is more probable (Ref 5). There are 2 tables and 5 references, 1 of which is Soviet.

SUBMITTED: February 21, 1958

1. Hydrogen--Exchange reactions
2. Alkyl chlorides--Exchange reactions
3. Hydrochloric acid--Exchange reactions
4. Butanol--Chemical reactions
5. Chlorine--Chemical reactions
6. Substitution reactions

Card 3/3

5(4)

AUTHORS:

Setkina, V. N., Kursanov, D. N.

SOV/62-59-3-8/37

TITLE:

Investigation of Hydrogen Exchange of Triarylcarbinols and Arylalkylcarbinols With Acids (Izucheniye vodorodnogo obmena triarilkarbinolov i arilalkilkarbinolov s kislotami)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 3, pp 433-436 (USSR)

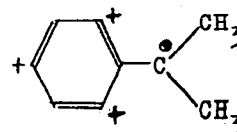
ABSTRACT:

In the present paper the hydrogen exchange between the tertiary aliphatic-aromatic alcohols and  $D_3PO_4$  as well as between aromatic alcohols and  $D_2SO_4$  was investigated. The investigation of the hydrogen exchange is difficult in tertiary aliphatic-aromatic alcohols because of their strong tendency toward dehydrogenation, in which olefins are formed. The formation of olefins can be retarded if the reaction between anhydrous phosphoric acid and tertiary alcohols takes place in absolute ether solution at low temperatures ( $-5-0^\circ$ ). For comparison the hydrogen exchange of structurally similar aliphatic and alicyclic alcohols was investigated (Table 1). It may be seen that the substitution of the aromatic radical for the aliphatic one retards the hydrogen exchange in the tertiary

Card 1/3

Investigation of Hydrogen Exchange of Triarylcarbinols SOV/62-59-3-8/37  
and Arylalkylcarbinols With Acids

alcohol to a considerable extent. The investigation of the hydrogen exchange in tertiary aromatic alcohols - triarylcarbinols - does not offer great difficulties since these alcohols have no tendency towards dehydrogenation and form with strong acids homogeneous colored solutions which contain the triarylcarbonium ions. The investigation results of the hydrogen exchange of triarylcarbinols with anhydrous  $D_2SO_4$  at  $20^\circ$  are given in table 2. It was found that no hydrogen exchange takes place there. The cause for it might be the delocalization of the positive charge:



Under the same conditions under which benzene itself and its homologues readily exchange hydrogen, no exchange of the hydrogen atoms directly combined with the benzene nucleus was observed in the substances investigated. This might be due to the fact that, as a consequence of the positive charge

Card 2/3

Investigation of Hydrogen Exchange of Triaryl-  
carbinols and Arylalkylcarbinols With Acids

SOV/62-59-3-8/37

of carbonium ions, they become inactive with respect to the reaction of the electrophilic substitution, as represented by the hydrogen exchange with acids (Ref 3). Apparently, on dissolution of the triarylcarbinols in anhydrous sulphuric acid no sulphonation takes place for the same reason. There are 2 tables and 3 references, 1 of which is Soviet.

ASSOCIATION: Institut elementoorganicheskikh soedineniy Akademii nauk SSSR  
(Institute of Elemental Organic Compounds of the Academy of  
Sciences, USSR)

SUBMITTED: July 6, 1957

Card 3/3

5(4)

AUTHORS:

Vol'pin, M. Ye., Zhdanova, K. I., SOV/62-59-4-37/42  
Kursanov, D. N., Setkina, V. N., Shatenshteyn, A. I.

TITLE:

On the Interaction of Tropilium Salts With Electrophilic Reagents (O vzaimodeystvii soley tropiliya s elektrofil'nyimi reagentami)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 4, pp 754-755 (USSR)

ABSTRACT:

This is a brief communication on the investigation of the deuterium exchange of tropilium salt in anhydrous  $D_2SO_4$ .

It was found that at room temperature the tropilium ion does not take part in the reaction of the deuterium exchange even in the course of 168 hours. Thereafter the deuterium exchange was investigated under aggravated conditions, in liquid DBr in the presence of  $AlBr_3$ . It was found that tropilium bromide does practically not exchange the deuterium even under aggravated conditions, with  $AlBr_3$  excess. (The exchange amounts to no more than 0.9 % in the course of 94 hours). The experiments showed a strong restraint of the electrophilic attack in tropilium salts. In this respect tropilium turned out to

Card 1/2

On the Interaction of Tropilium Salts With Electrophilic Reagents

SOV/62-59-4-37/42

be considerably more inactive than benzene and even unsaturated hydrocarbons. The cause of such a difficult course of the electrophilic substitution in the tropilium ion might be that all carbon atoms of the tropilium ring have a positive charge and the system has an electron deficit. This is in accordance with the general conception of the effect of the charge on the deuterium exchange (Ref 5). It can be expected that also other electrophilic reactions will be as little characteristic of the tropilium ion and as difficult as the deuterium exchange. There are 7 references, 4 of which are Soviet.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental-organic Compounds of the Academy of Sciences, USSR). Fiziko-khimicheskiy institut im. Karpova (Physico-chemical Institute imeni Karpov)

SUBMITTED: September 7, 1958

Card 2/2

5(4)

AUTHORS:

Setkina, V. N., Kursanov, D. N.,  
Bykova, Ye. V.

SOV/62-59-4-40/42

TITLE:

On the Mobility of Hydrogen Atoms in Tertiary Alkylchlorides  
in the Presence of Lewis acids (O podvizhnosti atomov vodo-  
roda v tretichnykh alkilkhloridakh v prisutstvii l'yuisovskikh  
kislota)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk,  
1959, Nr 4, p 758 (USSR)

ABSTRACT:

In this letter to the editor the authors write: "We discovered  
that hydrogen atoms acquire proton mobility in tertiary  
alkylchlorides in the presence of salts of coordination-un-  
saturated metals belonging to the Lewis acids. Tertiary  
butyl chloride, e.g., which does practically not exchange  
hydrogen with acetic acid anhydride enriched with deuterium  
easily exchanges hydrogen atoms for deuterium in the same  
medium at low temperatures in the presence of  $\text{FeCl}_3$ ,  $\text{SbCl}_5$ ,  
 $\text{SnCl}_4$ ,  $\text{ZnCl}_2$ ,  $\text{HgCl}_2$ , etc. The investigation of the hydrogen  
exchange kinetics of tertiary alkyl chlorides showed that  
the exchange rate depends mainly on the nature of the metal.

Card 1/2

On the Mobility of Hydrogen Atoms in Tertiary  
Alkylchlorides in the Presence of Lewis Acids

SOV/62-59-4-40/42

The lyusic acids can be arranged in the following order according to their effect on the hydrogen exchange rate:  $\text{FeCl}_3 \approx \text{SbCl}_5 > \text{SnCl}_4 > \text{ZnCl}_2 > \text{HgCl}_2$ . This order is similar to that in which their catalytic activity in the reactions of the type of the Friedel-Crafts reactions decreases. We presume that the reason for the described effect of Lewis Acids is that they promote the heterolysis of the carbon-chlorine bond and that the hydrogen exchange in these cases is connected with the carbonium ion formation."

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR  
(Institute of Elemental-organic Compounds of the Academy of Sciences, USSR)

SUBMITTED: January 10, 1959

Card 2/2



SETKINA, V.N.; KURSANOV, D.N.

Isotopic exchange reactions involving the hydrogen of halo alkyls. Report No.1: Hydrogen exchange with tert. butyl chloride in glacial acetic acid in the presence of aprotic acids. Izv. AN SSSR. Otd. khim. nauk no.11:2032-2036 N '60. (MIRA 13:11)

1. Institut elementoorganicheskikh soedineniy AN SSSR.  
(Deuterium) (Butyl chloride)

SETKINA, V.N.; KURSANOV, D.N.

Isotopic exchange of hydrogen in primary and secondary alkyl chlorides.  
Dokl. AN SSSR 136 no.6:1345-1348 F '61. (MIRA 14:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR. 2. Chlen-  
korrespondent AN SSSR (for Kursanov).  
(Alkyl chlorides)  
(Deuterium)

SETKINA, V.N.; KURSANOV, D.N.

Ionization of tert-alkyl trifluoroacetates in anhydrous trifluoroacetic acid. Izv. AN SSSR. Otd. khim. nauk no.2:378 F '61.

(MIRA 14:2)

1. Institut elementoorganicheskikh soedineniy AN SSSR.  
(Acetic acid)

KURBANOV, L.N.; SETRINA, V.K.

Proton mobility of hydrogen ions in acetyl chloride. Dokl.  
AN SSSR 137 no. 1:96-98 Ir-Apr '61. (MIRA 14:2)

1. Institut elementoorganicheskikh sovedineniy Akademii nauk  
SSSR. 2. Cheln-korrespondent AN SSSR (for Kursanov).  
(Acetyl chloride) (Protons)

KURSANOV, D.N.; BYKOVA, Ye.V.; SETKINA, V.N.

Isotopic exchange reactions involving a hydrogen of alkyl halides.  
Report No.2: Hydrogen exchange of tertiary alkyl chlorides in  
anhydrous acetic acid and in the presence of aprotic acids. Izv.  
AN SSSR Otd.khim.nauk no.4:664-667 Ap '61. (MIRA 14:4)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.  
(Deuterium) (Alkyl chlorides)

SETKINA, V.N.; KURSANOV, D.N.

Isotopic exchange reactions involving a hydrogen of alkyl halides.  
Report No. 3: Role of aprotic acids in hydrogen exchange reactions  
of alkyl chlorides. Izv.AN SSSR Otd.khim.nauk no.4:668-672 Ap '61.  
(MIRA 14:4)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.  
(Acids, Organic) (Alkyl chlorides) (Deuterium)

BYKOVA, Ye.V.; SETKINA, A.N.; KURBANOV, D.N.

Isotopic exchange reactions involving a hydrogen of alkyl halides.  
Report No.4: Hydrogen exchange of tertiary alkyl bromides in  
anhydrous acetic acid in the presence of aprotic acids. Izv.  
AN SSSR. Otd.khim.nauk no.7:1303-1306 J1 '61. (MIRA 14:7)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.  
(Alkyl bromides) (Deuterium)

SETKINA, V.N.; KURSANOV, D.N.; VITT, S.V.; MARTINKOVA, N.S.

Isotopic exchange of hydrogen of primary alkyl chlorides in the  
presence of aprotic acids. Izv.AN SSSR.Otd.khim.nauk no.11:  
2081-2083 N '61. (MIRA 14:11)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.  
(Hydrogen--Isotopes) (Chlorides)



SETKINA, V.N.; KURSANOV, D.N.; BYKOVA, Ye.V.

Isotopic exchange of hydrogen in trifluoroacetic acid esters.  
Report No.1: Hydrogen exchange of alkyltrifluoroacetates with  
trifluoroacetic acid. Izv.AN SSSR.Otd.khim.nauk no.8:1367-1372  
Ag '62. (MIRA 15:8)

1. Institut elementoorganicheskikh soedineniy AN SSSR.  
(Hydrogen--Isotopes) (Acetic acid)

S/062/62/000/011/002/021  
B101/B144

AUTHORS: Nesmeyanov, A. N., Kursanov, D. N., Setkina, V. N.,  
Kislyakova, N. V., and Kochetkova, N. S.

TITLE: Study of hydrogen exchange in nonbenzoidic aromatic systems  
(cenes). Communication 1. Hydrogen exchange of ferrocene,  
and mono- and diacetyl ferrocene, with acids

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh  
nauk, no. 11, 1962, 1932 - 1936

TEXT: An investigation was made of the hydrogen exchange between the  
following, dissolved in benzene: ferrocene, acetyl ferrocene, diacetyl  
ferrocene, or toluene and trifluoro deuterio acetic acid at 25°C, and of  
ferrocene with deuterio sulfuric acid. In acetylated ferrocenes, the  
deuterium added on the acetyl group was removed by 160 - 170 hrs standing  
in 10% alcoholic KOH solution, and the amount of deuterium added on the  
cyclopentadienyl rings was determined from the density of the water ob-  
tained when the compound was burned. The compound : acid : benzene ratio  
was 1 : 3 : 20. Experiments with  $CF_3COOD$  gave the following rate constants

Card 1/2

Study of hydrogen exchange in...

S/062/62/000/011/002/021  
B101/B144

for the exchange reaction ( $\text{sec}^{-1}$ ): ferrocene  $1.6 \cdot 10^{-4}$ ; acetyl ferrocene  $1.5 \cdot 10^{-7}$ ; diacetyl ferrocene  $7.7 \cdot 10^{-8}$ ; toluene  $3 \cdot 10^{-8}$ . Under the given conditions, benzene did not react with  $\text{CF}_3\text{COOD}$ . A 50% hydrogen exchange between ferrocene and  $\text{D}_2\text{SO}_4$  occurred after 5 min. But no isotopic equilibrium was established because part of the ferrocene oxidizes to ferricinium ion, which does not react with  $\text{D}_2\text{SO}_4$ , as has been shown by special experiments. On the other hand, deuterium phosphoric acid had no oxidizing action; here the exchange proceeded until reaching equilibrium. There are 6 tables. ✓

ASSOCIATION: Institut elementoorganicheskikh soedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: March 28, 1962

Card 2/2

NESMEYANOV, A.N., akademik; KURSANOV, D.N.; SETKINA, V.N.; KISLYAKOVA, N.V.;  
KOCHETKOVA, N.S.; MATERIKOVA, R.B.

Hydrogen isotope exchange of cyclopentadienylmanganesetricarbonyl.  
Dokl. AN SSSR 143 no.2:351-353 Mr '62. (MIRA 15:3)

1. Institut elemento-organicheskikh soyedineniy AN SSSR. 2. Chlen-  
korrespondent AN SSSR (for Kursanov).  
(Hydrogen--Isotopes)  
(Cyclopentadiene)

NESMEYANOV, A.N.; KURSANOV, D.N.; SETKINA, V.N.; KISLYAKOVA, N.V.;  
KOCHETKOVA, N.S.

Hydrogen exchange of nonbenzenoid (ferrocene) aromatic systems.  
Report No.1: Hydrogen exchange of ferrocene and mono- and diacetyl-  
ferrocene with acids. Izv.AN SSSR. Otd.khim.nauk no.11:1932-1936  
N '62. (MIRA 15:12)

1. Institut elementoorganicheskikh soyedineniya AN SSSR.  
(Deuterium) (Ferrocene) (Acids)

SETKINA, V.N.; KURSANOV, D.N.

Hydrogen exchange of saturated hydrocarbons in homogeneous media.  
Report No.1: Exchange of hydrogen atoms between methylcyclohexane and  
deuterium chloride in nitrobenzene solution in the presence of aprotic  
acids. Izv. AN SSSR. Otd.khim.nauk no.6:992-995 Je '63.  
(MIRA 16:7)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.  
(Cyclohexane) (Deuterium compounds) (Hydrogen)

SETKINA, V.N., GINZBURG, A.G.; FEDIN, E.I.; KURBANOV, D.N.

Hydrogen isotope exchange in hexa-substituted benzenes. Dokl. AN SSSR  
158 no.3:671-674 S '64. (MIRA 17:10)

1. Institut elementoorganicheskikh soedineniy AN SSSR. 2. Chlen-  
korespondent AN SSSR (for Kurbanov).

SETKINA, V.N.; SOKOLOV, S.D.

Isotope hydrogen exchange of 3,5-dimethylisoxazole with acids.  
Izv. AN.SSSR.Ser.khim. no. 5:936-938 My '64. (MIRA 17:6)

1. Institut elementoorganicheskikh soedineniy AN SSSR.



L 24836-65 EWT(m)/EPF(c)/EWP(j) Pc-L/Pr-L RM

ACCESSION NR: AP4047409

S/0062/64/000/010/1911/1911

18  
17  
B

AUTHOR: Kursanov, D. N.; Setkina, V. N.; Novikov, Yu. N.

TITLE: Reversible hydride exchange of hydrogen in Si-H bonds of phenylsilanes

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 10, 1964, 1911

TOPIC TAGS: phenylsilane, hydrogen deuterium exchange, isotopic hydrogen exchange, exchange reaction kinetics, nucleophilic reaction

ABSTRACT: The first example of reversible hydride exchange in organosilanes was observed in the reactions of phenylsilanes with  $\text{LiAlD}_4$  in ether solution in which the hydrogen atoms in the Si-H bonds were exchanged for deuterium. The kinetics of the isotopic exchange of hydrogen were studied in reactions of  $\text{LiAlD}_4$  with mono-, di-, and triphenylsilanes; the rates of the hydrogen exchange for these compounds at 30°C were  $5.7 \cdot 10^{-5}$ ,  $6 \cdot 10^{-5}$ , and  $2.6 \cdot 10^{-6}$ , respectively. The more rapid exchange rate for the diphenylsilane was explained by the strong electron acceptor nature of the phenyl group in comparison to the Si atom,

Card 1/2

L 24836-65

ACCESSION NR: AP4047409

indicating the nucleophilic nature of this reaction. The slow exchange rate in the triphenylsilane was attributed to steric hindrance. Orig. art. has: no graphics

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR  
(Institute of Organometallic Compounds Academy of Sciences SSSR)

SUBMITTED: 15Jul64

ENCL: 00

SUB CODE: GC

NO REF SOV: 000

OTHER: 000

Card 2/2

KURSANOV, D.N.; SETKINA, V.N.; BYKOVA, Ye.V.

Hydrogen exchange of saturated hydrocarbons in homogeneous media.  
Report No.2: Hydrogene exchange of methylcyclohexane in solutions  
of trifluoroacetic and sulfuric acids at different values of the  
acidity function. Izv. AN SSSR Ser. khim. no.2:249-251 '65.

(MIRA 18:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

NESMEYANOV, A.N.; KURSANOV, D.N.; SETKINA, V.N.; KISLYAKOVA, N.V.; KOLOBOVA,  
N.Ye.; ANISIMOV, K.N.

Isotopic exchange of hydrogen atoms in cyclopentadienyl rhenium tricarbonyl.  
Izv. AN SSSR. Ser. khim. no.4:762 '65. (MIRA 18:5)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

L 46318-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM

ACCESSION NR: AP5007566

S/0020/65/150/005/1090/1092

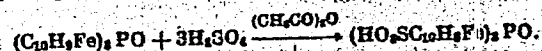
AUTHOR: Nesmeyanov, A. N. (Academician); Kursanov, D. N. (Corresponding member AN SSSR); Vil'chevskaya, V. D.; Kochetkova, N. S.; Setkina, V. N.; Novikov, Yu. N.

TITLE: Reactions of triferrocenylphosphine oxide

SOURCE: AN SSSR. Doklady, v. 160, no. 5, 1965, 1090-1092

TOPIC TAGS: cyclopentadienyl/metal, ferrocene, iron organic compound, phosphine oxide, organometallic compound

ABSTRACT: Triferrocenylphosphine oxide was sulfonated to produce tris(1-sulfo-ferrocenylene-1')phosphine oxide:



The product readily forms water-soluble salts when acted upon by Na, Ba, Pb and Mn carbonates, and its aqueous solutions are extremely unstable. When acted upon by excess dilute  $\text{H}_2\text{SO}_4$ , triferrocenylphosphine oxide decomposes to form diferrocenylphosphonic acid. This easy detachment of only one ferrocenyl radical is unique.

Card 1/2

L 46318-65

ACCESSION NR: AP5007566

No decomposition was observed on prolonged boiling of triferrocenylphosphine oxide with 50% NaOH. A hydrogen isotope exchange reaction was conducted in trifluoroacetic acid containing 51.4 at. % deuterium, and the kinetics of this exchange were investigated. The rate constants of the hydrogen exchange ( $K_{H.E.}$ ) were calculated to be  $1.6 \times 10^{-7}$ ,  $4.4 \times 10^{-7}$ , and  $12.8 \times 10^{-7} \text{ sec}^{-1}$  respectively. These values point to strong electron-acceptor properties of the phosphine oxide group. IR spectra of triferrocenylphosphine oxide separated after the hydrogen exchange and containing about 50 at. % deuterium showed that most of the deuterium was present in the unsubstituted cyclopentadienyl rings. The authors conclude that the electrophilic substitution reactions, i.e., sulfonation and hydrogen exchange, take place primarily in the unsubstituted cyclopentadienyl rings of ferrocenylphosphine oxide. The experimental procedure employed is described. Orig. art. has: 1 table.

ASSOCIATION: Institut elementoorganicheskikh sovedeniy Akademii nauk SSSR  
(Institute of Organometallic Compounds, Academy of Sciences SSSR)

SUBMITTED: 21Jul64

ENCL: 00

SUB CODE: 00

NO REF SOV: 006

OTHER: 004

Card 2/2 *pm*

SETKINA, V.N.; BARANETSKAYA, N.K.; ANISIMOV, K.N.; KURSANOV, D.N.

Isotope exchange of hydrogen atoms of benzene chromium tricarbonyl.  
Izv. AN SSSR. Ser. khim. no.10:1873-1874 O '64. (MIRA 17:12)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

KURSANOV, D.N.; SETKINA, V.N.; NOVIKOV, Yu.N.

Reversible hydride exchange of hydrogen in Si-H bonds of  
phenylsilanes. Izv. AN SSSR. Ser. khim. no.10:1911 O '64.

(MIRA 17:12)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.



KURSANOV, D.N.; SETKINA, V.N.; BARANEISKAYA, N.K.; DVORYANTSEVA, G.G.;  
MATERIKOVA, R.B.

Isotopic exchange of hydrogen atoms in cyclopentadienyl rings  
of cobalticinium compounds. Dokl. AN SSSR 161 no.4:847-850 Ap  
'65, (MIRA 18:5)

1..Chlen-korrespondent AN SSSR (for Kursanov).

L 55127-65 EWT(m)/EPF(c)/T/EWP(j) Pc-4/Pr-4 RM  
 ACCESSION NR: AP5012767 UR/0020/65/161/006/1349/1351

AUTHOR: Nesmeyanov, A. N.; Kursanov, D. N. (Corresponding member AN SSSR);  
 Nefedova, M. N.; Setkina, V. N.; Perevalova, E. G.

TITLE: The replacement of a halogen by a proton in halogenoferrocenes

SOURCE: AN SSSR. Doklady, v. 161, no. 6, 1965, 1349-1351

TOPIC TAGS: halogen, ferrocene, deuterium

ABSTRACT: In studying the isotopic exchange of hydrogen in acid media an unexpected reaction of iodoferrocene with the acid was detected. In treating solutions of iodoferrocene in organic solvents (benzene, methylene chloride) with deuterio-trifluoroacetic acid (95 atomic percent deuterium) there is a rapid formation of the ferricene cation and a complex compound of iodoferrocene with iodine. The ferricene cation after reduction by sodium sulfite yields ferrocene containing 9.5 atomic percent deuterium, which corresponds exactly to the replacement of the iodine atom by deuterium. In the case of bromo- and chloroferrocene the substitution of deuterium for the halogen also is observed but to a lesser extent than with iodoferrocene. For the tests 1 ml of deuterio-trifluoroacetic acid (95 atomic percent deu-

Card 1/2

36  
35  
B

L 55127-65

ACCESSION NR: AP5012767

terium, boiling point of 71-72°) which had been previously saturated with nitrogen was added to a solution of 0.6 grams (0.0019 mol) of iodoferrocene (melting point of 45-46°, from methanol) in 1.5 ml of benzene in a stream of pure dry nitrogen. Immediately a violet color appeared and a black-violet precipitate settled out. After 1-2 hours the precipitate was removed and the ferricine cation was extracted from the filtrate with water. The aqueous blue extract was treated with sodium sulfite until a yellow color appeared and was extracted with ether. After driving off the ether the yield was 0.09 grams (0.005 mol) of ferrocene. The precipitate was washed with benzene and purified through sublimation in a vacuum. The bromoferrocene and chloroferrocene were treated in a generally similar manner. Orig. art. has: two sets of equations.

ASSOCIATION: Institut elementoorganicheskogo sinteza Akademii nauk SSSR (Institute of Elementoorganic Synthesis, Academy of Sciences, SSSR)

SUBMITTED: 23Oct64

ENCL: 00

SUB CODE: GC, OC

NO REF SOV: 005

OTHER: 005

Card 2/2

NESMEYANOV, A.N., akademik; KURSANOV, D.N.; NEFEDOVA, M.N.; SETKINA,  
V.N.; PEREVALOVA, E.G.

Substitution of a proton for a halogen in ferrocene halides. D. 1.  
AN SSSR 161 no.6:1349-1351 Ap '65. (MIRA 1015)

1. Institut elementoorganicheskogo sinteza AN SSSR. 2. Chlen-kor-  
respondent AN SSSR (for Kursanov).

KUESANOV, D.N.; SETKINA, V.N.; NEFEDOVA, M.N.; NESMEYANOV, A.N.

Hydrogen isotope exchange in alkylferrocenes. Izv. AN SSSR. Ser. khim.  
no. 12:2218-2220 '65. (MIRA 18:12)

1. Institut elementoorganicheskikh soedineniy AN SSSR. Submitted  
April 21, 1965.

L 35317-06 EAT(m)/EAT(1) 71  
ACC NR: AP6026899

SOURCE CODE: UR/0062/65/000/012/2218/2220

AUTHOR: Kursanov, D. N.; Setkina, V. N.; Nefedova, M. N.; Nesmeyanov, A. N.  
ORG: Institute of Organometallic Compounds, AN SSSR (Institut elementoorganicheskikh sovedineniy AN SSSR)

TITLE: Isotopic exchange of hydrogen in alkylferrocenes

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 12, 1965, 2218-2220

TOPIC TAGS: isotope, hydrogen, ferrocene, electron donor, acetic acid, benzene, chemical kinetics

ABSTRACT: The reaction of the isotopic exchange of hydrogen in acid media was used as a model for investigating the laws of electrophilic substitution in aromatic systems. Ferrocene readily enters into this reaction and the acetyl groups introduced into the ferrocene molecules markedly reduce the exchange rate of the hydrogen atoms on the nucleus. By investigating the effect of electron-donor substitutes in ferrocene on its reactivity, the authors determined the rate constants of the isotopic exchange of hydrogen of methyl-, ethyl- and 1,1'-diethylferrocenes in a mixture of deuterioacetic and trifluoroacetic acids. It was shown that the introduction of alkyl groups enhances the reactivity of the ferrocene nucleus to a much smaller degree than that of the benzene nucleus. In alkylferrocenes all the hydrogen atoms of the ferrocene nucleus participate in the exchange, and the kinetics of isotopic exchange is not affected by the differences in the reactivity of the various positions. Orig. art. has: 4 tables. [JPRS: 36,455]

SUB CODE: 07 / SUBM DATE: 21Apr65 / ORIG REF: 003 / OTH REF: 001

Card 1/1

UDC: 542.957+546.72+546.11.2

ACC NR: AP6017884  
 AUTHOR: Negmoyanov, A. N.; Kursanov, D. N.; Setkina, V. N.; Kislyakova, N.V.;  
Kolobova, D. N.; Anisimov, K. N.  
 ORG: Institute of Organometallic Compounds, Academy of Sciences, SSSR (Institut  
elementoorganicheskikh soedineniy Akademii nauk SSSR)  
 TITLE: Isotopic exchange of hydrogen atoms of manganese cyclopentadienyltricarbonyl  
and rhenium cyclopentadienyltricarbonyl in alkaline media  
 SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 5, 1966, 944  
 TOPIC TAGS: hydrogen, manganese compound, rhenium compound, deuterium, *isotope*,  
*isotopic exchange*  
 ABSTRACT: The authors found that manganese cyclopentadienyltricarbonyl (MCT) and  
 rhenium cyclopentadienyltricarbonyl (RCT) enter into the reaction of isotopic exchange  
 of hydrogen under the influence of alkali catalysts. For example, all the hydrogen  
 atoms of the cyclopentadienyl rings of MCT and RCT are exchanged for deuterium in the  
 reaction with deuterioethanol in the presence of sodium alcoholate. The kinetics of  
 this reaction were studied at 100°C at molar ratios MCT or RCT:C<sub>2</sub>H<sub>5</sub>OD:C<sub>2</sub>H<sub>5</sub>ONa = 1:  
 120:9.5. The rate constants of hydrogen exchange under these conditions are  $3 \times 10^{-6}$   
 sec<sup>-1</sup> and  $80 \times 10^{-6}$  sec<sup>-1</sup> for MCT and RCT respectively, i.e., the relative reactivity  
 of the cyclopentadienyl rings of the rhenium derivative is almost 27 times that of  
 UDC: 547.1'3 + 541.127 + 539.183.2 + 661.183.123  
 Card 1/2

1 36516-56

ACC NR: AP6017884

the cyclopentadienyl derivative of manganese. The opposite relationship is observed in acid catalysis, and the exchange capacity of the hydrogen atoms in the cyclopentadienyl rings linked to manganese is higher than in the rhenium compounds. It is concluded that on passing from Mn (an element of period 4) to Re (period 6) of group VII of the periodic system, the reactivity of cyclopentadienyl ligands in acid media decreases, whereas in alkaline media the opposite is observed.

SUB CODE: 07/ SUBM DATE: 12Feb66/ ORIG REF: 002/ OTH REF: 001

Card

2/2/MLP



L 35327-66	EWT(m)/EWP(j)	RM	SOURCE CODE: UR/0020/66/166/002/0374/0377
ACC NR: AP6026836			
AUTHOR: <u>Nefedova, M.N.</u> ; <u>Kursanov, D.N.</u> (Corresponding member AN SSSR); <u>Setkina, V.N.</u> ; <u>Perevalova, E.G.</u> ; <u>Nesmeyanov, A.N.</u> (Academician)			
ORG: none			
TITLE: Effect of substituents on the rate of isotopic hydrogen exchange in ferrocene derivatives			
SOURCE: AN SSSR. Doklady, v. 166, no. 2, 1966, 374-377			
TOPIC TAGS: ferrocene, electron donor, dissociation constant, substituent, reaction rate			
ABSTRACT: The authors determined the rate constants for acid isotopic exchange of hydrogen in six monosubstituted and four disubstituted ferrocenes. The relative rate constants $K_{rel}$ were then calculated assuming unity for unsubstituted ferrocene. The substituents studied included both electron-donor and electron-accepter types. An analysis of the resultant data shows that the effect of the substituent on the reaction rate in an aromatic compound may be described as a combination of induction and conjugation. The conjugation effect is much less important in this case than it is in electrophilic substitution in the benzene series. It was found that the substituent			
Card 1/2	UDC: 546.11.2+542.957+546.72		

L 35327-66

ACC NR: AP6026836

constants obtained from the dissociation constants for phenylacetic acids may be used as a quantitative index of the effect which the substituent has on the reaction rate. Curves for  $\ln k/k_0$  for all substituents studied show a linear correlation with these constants. Heterocyclic disubstituted derivatives lie on this same line if doubled values of substituent constants are used, i.e., the substituents have an additive effect within the limits of experimental error. The authors thank S.L. Portnova and G.P. Syrova for taking the nuclear resonance spectra. The authors further thank V.A. Pal'm and N.P. Gambaryan for participating in the discussions of the results. Orig. art. has: 1 figure and 1 table [JPRS: 36, 455]

SUB CODE: 07 / SUBM DATE: 23Sep65 / ORIG REF: 013 / OTH REF: 010

Card 2/2 *Ldk*

DONNER, L.; MALY, Vl.; technika spoluprace; BRABCOVA, S.; SETKOVA, O.;  
HOUSKOVA, J.

The effect of some components of food on blood coagulation. Sborn.  
lek. 63 no.7/8:219-224 JI '61.

1. II. interni klinika fakulty vseobecneho lekarstvi University  
Karlov v Praze, prednosta prof. dr. F.Herles. Ustav organizace  
zdravotnictvi fakulty vseobecneho lekarstvi University Karlov  
v Praze, prednosta prof. dr. V.Prosek.  
(BLOOD COAGULATION pharmacol.) (FOOD)

CZECHOSLOVAKIA

DONNER, L; SETKA, J; HOUSKOVA, J; SETKOVA, O.

Second Internal Medicine Clinic (II. vnitřní klinika),  
Prague

Brno, Vnitřní lékařství, No 9, 1963, pp 886-890

"The Significance of the Investigation of Blood Coagulation  
in Cirrhosis of the Liver."

DONNER, L. Technická spolupráce: HOUSKOVA, J.; SETKOVA, O.

Apropos of thrombolytic therapy. Cas.lek.cesk. 103 no.4:102-107  
24 Ja'64.

1. II.interní klinika fakulty všeobecného lékařství KU v Praze;  
prednosta: prof.dr. F.Herles.

X

DONNER, L.; HEYROVSKY, A. Technicka psoluprace: SETKOVA, O.; HOUSKOVA, J.

Anticoagulant properties of the arterial wall. Cas. lek. cesk.  
103 no.23:617-621 5 Je'64

1. II. interni klinika fakulty vseobecneho lekarstvi KU [Karlovy university] v Praze (prednosta: prof. dr. F. Herles), a  
Angiologicka laborator pri IV. interni klinice fakulty vse-  
obecneho lekarstvi KU [Karlovy university] v Praze (reditel:  
prof. dr. B. Prusik).

DONNER, L.; HEYROVSKY, A.; Technicka spoluprace: HOUSKOVA, J.; SETKOVA, O.

Anticoagulant properties of the aortic wall in arteriosclerosis.  
Cas. lek. cesk. 103 no.43:1185-1187 23 0 '64.

1. II. interni klinika fakulty vseobecneho lekarstvi Karlovy  
University v Praze, (prednosta prof. dr. F. Heries) Angiologicka  
laborator Ceskoslovenskej akademie ved, (vedouci prof. dr. B.  
Prusik).

DONNER, L.; Technicka spoluprace: SETKOVA, O. HGUSKOVA, J.

The relationship between various coagulation factors and  
fibrinolysis. Vnitřní lek. 11 no.6:537-544 Je'65.

1. II. vnitřní klinika Karlovy University. Praha (prednosta - prof.  
Dr. F. Herles).



DONNER, L. (Praha 2, U nemocnice 2) Techn. spoluprace: HOUSKOVA, J.; SETKOVA, O.

Changes in fibrinolysis and blood coagulation in thrombolytic treatment with streptokinase. Cas. lek. cesk. 104 no. 24: 641-645 18 Je'65.

1. II interni klinika fakulty vseobecného lékařství Karlovy University v Praze (prednosta: prof. dr. F. Herles, DrSc) a  
IV. interni klinika fakulty vseobecného lékařství Karlovy University v Praze (prednosta: prof. dr. M. Pacik, DrSc.).

CA

Production of normal ligroin. Wladyslaw Setkiewicz. *Wzrost 2, 315, 325(1910).* - From a gasoline fraction of Grabownica nonparaffinic crude oil, normal ligroin was prepd. as a substitute for Kahlbaum Naphtha. A fraction, b. 65-95°, of the gasoline was refined with ordinary and with fuming H<sub>2</sub>SO<sub>4</sub>, by using a total of 120% by wt. of acid. The product b. 63-90° (Le Bel-Henninger column) had d. 0.695 and aniline point 58.6°, and contained 0.5% aromatic hydrocarbons. In pptn. of hard asphalt from oils, it gave exactly the same results as did Kahlbaum Naphtha. Bruno C. Metzner

22

COMMON ELEMENTS

COMMON VARIABLES MORE

ASPH-51A METALLURGICAL LITERATURE CLASSIFICATION

SECTION 1

SECTION 2

SECTION 3

SECTION 4

SECTION 5

SECTION 6

SECTION 7

SECTION 8

SECTION 9

SECTION 10

SECTION 11

SECTION 12

SECTION 13

SECTION 14

SECTION 15

SECTION 16

SECTION 17

SECTION 18

SECTION 19

SECTION 20

SECTION 21

SECTION 22

SECTION 23

SECTION 24

SECTION 25

SECTION 26

SECTION 27

SECTION 28

SECTION 29

SECTION 30

SECTION 31

SECTION 32

SECTION 33

SECTION 34

SECTION 35

SECTION 36

SECTION 37

SECTION 38

SECTION 39

SECTION 40

SECTION 41

SECTION 42

SECTION 43

SECTION 44

SECTION 45

SECTION 46

SECTION 47

SECTION 48

SECTION 49

SECTION 50

SECTION 51

SECTION 52

SECTION 53

SECTION 54

SECTION 55

SECTION 56

SECTION 57

SECTION 58

SECTION 59

SECTION 60

SECTION 61

SECTION 62

SECTION 63

SECTION 64

SECTION 65

SECTION 66

SECTION 67

SECTION 68

SECTION 69

SECTION 70

SECTION 71

SECTION 72

SECTION 73

SECTION 74

SECTION 75

SECTION 76

SECTION 77

SECTION 78

SECTION 79

SECTION 80

SECTION 81

SECTION 82

SECTION 83

SECTION 84

SECTION 85

SECTION 86

SECTION 87

SECTION 88

SECTION 89

SECTION 90

SECTION 91

SECTION 92

SECTION 93

SECTION 94

SECTION 95

SECTION 96

SECTION 97

SECTION 98

SECTION 99

SECTION 100

PROCESSES AND PROPERTIES INDEX																									
<p>CA</p> <p>20</p> <p><b>Regeneration of cresol from cresol waters.</b> W1. Sci. Lowry, <i>Nafsa</i> 2, 438 (1960). Traces of cresol (3.5%) in waste water from the steam stripping of both the internal and the external phase derived in the solvent refining of mineral oils with cresol are recovered by extn. with fresh mineral oil going to the refining step. After two extns. with fresh oil the water contains only 0.1% cresol and may be dumped without causing a nuisance. The method affords large savings as compared with the usual removal of cresol by distn.</p> <p>Bruno C. Metzner</p>																									
<p>ASH S.A. METALLURGICAL LITERATURE CLASSIFICATION</p>																									

SETKOWICZ, W.

"New Tables for the Determination of the Viscosity Coefficient." (To be contd.) p. 71  
"Using Small-diameter Drill Balls for Well Boring." (To be contd.) p. 74. "A Device  
for the Complete Cleaning of Paraffin from Pump Pipes." p. 76 (NAFTA, Vol. 9, No. 3,  
Mar. 1953) Warszawa

SO: Monthly List of East European Accessions, Library of Congress, Vol. 2, No. 10,  
October 1953. Unclassified.

SETKOWICZ, W.

Fuel Abstracts  
June 1954  
Analysis, Testing  
Instruments

4937. NEW CHARTS FOR DETERMINATION OF VISCOSITY INDEX. Setkowicz, W.  
(Nafte (Petroleum, Krakow), 1953, vol. 9, 71-79, 99-108). Pt 1 gives the  
historical background and traces the development of this index from Dean  
and Davies formulae in Saybolt seconds and  $\text{cP}$ . European need for a  
formula in  $\text{cP}$  and  $\text{cS}$  has been first met by H. Otto by his graphical method,  
but increased range of viscosity of modern products has prompted the Polish  
Institute of Petroleum to commission author to extend this work. In  
company with Dr Revenda of Czechoslovakia he compared unofficial Polish  
tables with those officially used in Czechoslovakia and also with IP 73/42  
and ASTM B 567-41. Modified corrected formulae covering the various  
ranges are given. Tables are appended, and a provisional standard method  
is given using Vogel-Ossaga viscometer or similar instrument. I.P.

SETKO-100, W.

"New Tables for the Determination of Viscosity Coefficients." p. 99. "Using Small Diameter Drill Balls for Well Boring." (To be contd.) p. 103 (NAFTA, Vol. 9, No. 4, Apr. 1953) Warszawa

SO: Monthly List of East European Accessions, Library of Congress, Vol. 2, No. 10, October 1953. Unclassified.

Set Rowicz, W

4428

Setkowicz, W. Logarithmic Index of Viscosity

442133-0453

"Logarytmiczny wskaźnik lepkości" Nafta, No. 8, 1955, pp. 185-187, 4 tabs.

The temperature dependence of the viscosity of an oil is an important indication for assessing mineral oils, and can be represented in the form of a diagram. Several indices have already been suggested for characterizing oil viscosity curves. Of these the most common is the viscosity index by means of which it is possible to define by a single number the character of the viscosity curve for the oil tested. Of the other indices, reference is made to the kinematic viscosity ratio at 50 and 100°C., and attention is drawn to the fact that this depends on oil viscosity while oils with the viscosity index may have very different ratios of kinematic viscosity. The author suggests a new simple index based on the ratio of logarithms of kinematic viscosities

calculated from the empirical formula given in the paper. The character of the drop in the index is shown in a table which shows how this index can be used — much more conveniently than the index of viscosity increase — for measuring the efficiency of selective refining of oils.

Encl  
2/5/55

SP JM

SEKOWICZ, W.

A semitechnical installation for selective oil refining.

F. 336. (NAFTA) (Krakow, Poland) Vol. 13, no. 12, Dec. 1957

SO: Monthly Index of East European Accession (EEAI) LC Vol. 7, No. 5, 1958



HORTOLOMEI, N.academician,; FINGERHUT, Bruno,; SETLAGEC, D.,; CUNESCU, V.

The problem of arterial hypertension in unilateral surgical  
renal disorders. Probl. ter., Bucur. Vol 1:267-273 1954.

(KIDNEYS, diseases  
surg. disorders, unilateral, causing hypertension,  
ther. indic.)

(HYPERTENSION, etiol. & pathogen.  
renal surg. disord., unilateral, ther. indic.)

HORTOLOMEI, N., academician; SETLACEG, D.; HASNAS, N.

Therapy of bronchogiliary fistulas. Probl. ter., Bucur. 2:  
59-64 1955.

1. Institutul de terapeutica al Academiei R.P.R., sectia de  
chirurgie, spitalul Coltea.

(BRONCHI, fistula

bronchobiliary, surg.)

(BILIARY TRACT, fistula

bronchobiliary, surg.)

GHITESCU, T.; SETIACES, D.; LITARCZEK, G.; FOTIADE, B.

Cardiac resuscitation in mitral stenosis. Bul stiint., sect. med.  
7 no.4:1107-1128 Oct-Dec 55.

(MITRAL STENOSIS, surgery

cardiac arrest in, resuscitation & prev.)

(CARDIAC ARREST

in surg. of mitral stenosis, resuscitation & prev.)

(RESUSCITATION

in cardiac arrest during surg. of mitral stenosis)

GHITESCU, T.; STEFANESCU, T.; SETLACEC, D.

Reparative operations in arterial and arteriovenous aneurysms.  
Probl. ter., Bucur. 3:117-138 1956.

(ANEURYSM, surgery

reparative technics, in arterial & arteriovenous  
aneurysms)

(TRANSPLANTATION

venous transplants in repair of arterial & arteriovenous  
aneurysms)

HORTOLOMEI, N., Academician; GHITESCU, T.; STEFANESCU, Tr.; SEPLACEC, D.

Reestablishment of arterial circulation in arterial and arteriovenous aneurysms. Bul. stiint. sect. med. 8 no.1: 63-69 Jan-Mar 56.

(FISTULA, ARTERIOVENOUS, surgery  
reestablishment of arterial circ. by aneurysmorrhaphy,  
grafts & suture, methods)

(ANEURYSM, surgery  
(SAME)

(TRANSPLANTATION  
arterial homografts & venous autografts in surg. of  
arterial & arteriovenous aneurysms)

SETLACEC, D.

RUMANIA/Pharmacology. Toxicology. Narcotic and Hypnotic Drugs

V

Abs Jour : Ref Zhur - Biol., No II, 1958, No 51860

Author : Hortolomei N., Marinescu V., Setlacec D., Litarcezek G.

Inst : Rumanian Academy

Title : Anesthesia. Theoretical and Practical Problems

Orig Pub : Bibliot. med., NV Bucuresti. acad RPR, 1957, 798p., il. 52lei)

Abstract : No abstract

Card : 1/1

MARINESCU, V., prof.; SEPLACEC, D.; MALITCHI, E.; LITARCNECK, G.; FETIODE, B.

Some aspects of our experience: in cardiac surgery. Rumanian M.  
Rev. 3 no.3:25-36 J1-S '59.  
(HEART SURGERY)

MARINESKU, V.; SETLACHEK, D.; MALITSKI, E.; LITACHEK, G.; FOTIADE, B.

Certain aspects of our experiences with cardiac surgery. Khirurgiia, Sofia 12 no.11:929-944 '59.  
(HEART SURGERY)



MARINESCU, Voinea, prof.; SEFLACEC, D., dr.

The surgical treatment of coronary diseases. Med. inter., Bucur  
13 no.3:401-414 Mr '61.  
(CORONARY DISEASE surgery)

MARINESCU, V., prof.; SETLACEK, D.; PROINOV, D.; IONESCU, L.

Treatment of septal defects, stenosis of the pulmonary artery and tetralogy of Fallot with the aid of the interruption of circulation under hypothermia. Khirurgiia, Sofia 14 no.2/3:199-203 '61.

(HEART SEPTUM abnorm) (PULMONARY STENOSIS surg)  
(TETRALOGY OF FALLOT surg) (HYPOTHERMIA INDUCED)

MARINESCU, Voinea, prof.; SETLACEC, D.; GHITESCU, T.; STEFANESCU, Tr.

Correction of an interatrial septal defect associated with anomalies  
in the implantation of the right pulmonary veins. Rumanian M Rev.  
no.2:58-62 Ap-Je '60.

(HEART SEPTUM abnormalities) (PULMONARY VEINS abnormalities)

MARINESKU, V. [Marinescu, V.], prof.; SETLACHEK, D.; FOTIADE, B.; LITARCHEK, G.G.

Arrest and restoration of heart activity. Khirurgiia 39 no.9:  
19-23 S\*63 (MIRA 17:3)

1. Iz khirurgicheskoy kliniki ( zav. - prof. V.Marinesku)  
Bukharetskoy bol'nitsy "Funden".

MARINESCU, V. [Marinescu, V.], prof. (Bukharest); SETLACHEK, D. [Setlacec, D.]  
(Bukharest); PROINOV, F. (Bukharest); IONESCU, L. [Ionescu, L.]  
(Bukharest)

Treatment of defects of the cardiac septum by means of direct  
open heart suture in hypothermia. Vest.khir. 85 no.10:35-43  
0 '60. (MIRA 13:12)  
(HYPOTHERMIA) (HEART--ABNORMALITIES AND DEFORMITIES)

MARINESKU, V. [Marinescu, V.] prof.; SETLACHEK, D.; NASH, F.

Restoration of the arterial circulation in extracranial  
occlusions of the carotid artery. Khirurgiia 39 no.8:  
100-107 Ag '63. (MIRA 17:6)

1. Iz khirurgicheskogo otdeleniya bol'nitsy Funden' (rukovoditel'-  
prof. V. Marinesku [Marinescu, V.] i neyrokhirurgicheskogo  
otdeleniya bol'nitsy imeni G. Marinesku (rukovoditel'- prof.  
K.A. Arseni), Bukharest.

SETLACEC, I.D.

Preoperative preparation and postoperative care of commissurotomy patients. Bul stiint., sect. med. 7 no.4:1129-1138 Oct-Dec 55.

(PREOPERATIVE CARE

prep. of patients for commissurotomy in mitral stenosis)

(POSTOPERATIVE CARE

of commissurotomy patients)

(MITRAL STENOSIS, surgery

commissurotomy, preop. & postop. care)

NICOLAU, St. S.; SURDAN, C.; SARATEANU, D.; ATHANASIU, Pierrette;  
SORODOC, G.; POPESCU-DANESCU, Georgeta; BABES, V.;  
STEFANESCU, I.; ILIESCU, C.; RADESCU, R.; MALITCHI, E.;  
CADERE, T.; FLORIAN, I.; PARASCHIVESCU, N.; SETLACEK, D.;  
DUMITRESCU, St.; SILVIU DAN, S.

A study concerning the rickettsial or pararickettsial etiology  
of some cardiovascular diseases. Rev. sci. med. 8 no.3/4:  
151-158 '63.

1. Member of the Academy of the R.P.R. (for Nicolau).  
(RICKETTSIAL DISEASES) (ANTIBODIES)  
(CARDIOVASCULAR DISEASES) (ENDOCARDITIS)  
(PERICARDITIS) (HEART BLOCK) (CORONARY DISEASE)  
(THROMBOPHLEBITIS)



SETLIK, IVAN

transient phenomena in photo- (means as revealed by the  
production of oxygen. Ivan S. (Charles Univ., Prague),  
Rozprawy Akad. Nauk i Umj. 64, No. 3, 1-49 (Eng-  
lish summary. 60-8)(1954). Short induction phenomena  
which occur at the beginning and after cessation of illumina-  
tion, were studied in aerated suspensions of algae, phylloids,  
and leaves of higher plants by means of polarographic detns.  
of O (cf. C.A. 33, 1009\*, 1010\*; 44, 5434). These induction  
phenomena were in many respects similar to those observed  
in the photosynthetic reduction of CO<sub>2</sub>. Cf. C.A. 35,  
3656\*; 46, 6679a. Oldrich Sebek

CZECHOSLOVAKIA / Plant Physiology. Mineral Nutrition. I

Abs Jour: Ref Zhur-Biol., No 2, 1959, 5986.

Author : ~~Sotlik, Ivan.~~; Trnkova, Aleska.

Inst : Not given.

Title : Absorption of Phosphoric Acid Ions Through the Surface of Leaves.

Orig Pub: Preslia, 1957, 29, No 4, 337-348.

Abstract: The rate of P32 intake by plants, deposited on leaves of cultivated geranium in the form of  $\text{KH}_2\text{P}^{32}\text{O}_4$  solutions and the infusion of the labelled super-phosphate, was studied. The experiments were carried out with loose leaves and with the intact plant. The loose leaves were immersed by their petioles into Knop's solution. The rate of intake was judged by the radioactivity of the

Card 1/3

CZECHOSLOVAKIA / Plant Physiology. Mineral Nutrition. I

Abs Jour: Ref Zhur-Biol., No 2, 1959, 5986.

Abstract: significant after one day, following the moistening of the leaves, and increased by the 4th or 5th day. The radioactivity of petiole sections was greatest on the 3rd and 4th day after moistening of the leaves. The work was carried out at the Karlov Institute. Bibliography. 29 Titles. -- D. M. Grodzinskiy.

Card 3/3

SETLIK, J.

SETLIK, J. Phytospaleontologic and stratigraphic research on the Permian carboniferous beds near Jelenice in the Poshorany area. p. 37.

Vol. 31, No. 1, 1956.

VĚSTNÍK

GEOGRAPHY & GEOLOGY

Praha, Czechoslovakia.

See: East European Accession, Vol. 6, No. 2, Feb. 1957